

WHAT IS CLAIMED IS:

1. An atomizing apparatus, comprising:
an outer cylinder connected to an outlet;
an inlet which is connected to said outer cylinder, said inlet being perpendicular to an axial direction of said outer cylinder;
a chamber formed at an intersection of said outer cylinder and said inlet, wherein said chamber is in fluid communication with said inlet; and
an inner cylinder fitted inside said outer cylinder, wherein said inner cylinder contains a plurality of holes exposed to said chamber.

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2. An atomizing apparatus according to claim 1, wherein said holes in said inner cylinder are arranged as groups of holes, wherein each group contains holes with substantially the same diameter relative to one another, wherein a single group of holes is exposed to said chamber.

3. An atomizing apparatus according to claim 1, wherein an outer periphery of said inner cylinder abuts against an inner periphery of said cylinder, wherein said inner cylinder slidably moves in said axial direction.

4. An atomizing apparatus according to claim 1, wherein said plurality of holes are opposed to one another on a circumference that is the same as a circumference of said inner cylinder.

5. An atomizing apparatus according to claim 1, wherein said chamber is a pressurizing chamber, which is capable of carrying out atomization therein.

6. An atomizing apparatus according to claim 1, further comprising a plurality of pressure-leakage preventing members fitted into an inner diameter of said outer cylinder, whereby said pressure-leakage preventing members abut an outer periphery of said inner cylinder.

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7. An atomizing apparatus according to claim 1, further comprising a water passage provided in said inner cylinder, whereby atomization temperature is capable of being adjusted by adjusting temperature of water in said water passage.

8. An atomizing apparatus according to claim 1, further comprising a conduit passage connecting said outlet and a raw material supply port, whereby atomized material may be returned to said supply port through said conduit passage.

9. An atomizing apparatus according to claim 1, wherein said inner cylinder is connected to a screw positioned opposite said outlet of said outer cylinder, whereby said inner cylinder moves in said axial direction by turning said screw.

10. A method of preparing an atomized substance comprising:
a) pressurizing a raw material;
b) supplying said pressurized raw material to an atomizing apparatus;
and
c) atomizing a substance in said raw material to obtain an atomized substance.

11. A method of atomizing a substance according to claim 10, further comprising returning said atomized substance to said atomizing apparatus and re-atomizing said atomized substance to obtain a super-fine material.

12. A method according to claim 10, wherein said atomizing apparatus comprises:

- an outer cylinder connected to an outlet;
- an inlet which is connected to said outer cylinder, said inlet being perpendicular to an axial direction of said outer cylinder;
- a chamber formed at an intersection of said outer cylinder and said inlet, wherein said chamber is in fluid communication with said inlet; and
- an inner cylinder fitted inside said outer cylinder, wherein said inner cylinder contains a plurality of holes exposed to said chamber.